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ABSTRACT

The progress report on the Amigos two-way bilingual education program in the Cambridge (Massachusetts) public schools describes: research on the achievement in mathematics, Spanish, and English of Amigos students and students in control/comparison groups; data gathered on students' and parents' attitudes toward bilingualism and biculturalism; student's self-assessments of academic competence and self-esteem; teachers' judgments of students' academic competence and self-esteem; and social-interactional patterns among Amigos students from different ethnic backgrounds. Features and policies of the program are described in a discussion of the results. It was concluded that Spanish and English language skills had improved steadily in participants of the Amigos, transitional bilingual, and standard English-only programs, but that Amigos students had not suffered any academic loss in mathematics or English despite having only half their instruction in English. By grade 3, Amigos students developed classroom friendships independent of race or ethnicity. While English-Amigos and English controls had favorable views of bilingualism, the Spanish-Amigos were most favorable. Spanish-Amigos also rated themselves highest in personal satisfaction. A tabulation of survey responses and a brief bibliography are appended. (MSE)

RESEARCH REPORT: 7

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TWO-WAY BILINGUAL EDUCATION: A PROGRESS REPORT ON THE AMIGOS PROGRAM

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TWO-WAY BILINGUAL EDUCATION: A PROGRESS REPORT ON THE AMIGOS PROGRAM

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Two-Way Bilingual Education: A Progress Report on the Amigos Program

Abstract

The *Amigos* two-way bilingual education program began as a collaborative effort between the Cambridge (Massachusetts) Public Schools' departments of desegregation and transitional bilingual education. Parents, teachers, administrators, and members of the community formed a committee to explore the possibility of developing a program that would combine the best features of transitional bilingual education (for limited-English-proficient students) and language immersion education (for native English speakers). The committee sought a way to end the isolation of language minority students from the rest of the school and to provide language majority students with the opportunity to acquire proficiency in a second language.

The *Amigos* program commenced in September 1986 and currently serves close to 250 public school students, half of whom are from Spanish-speaking homes, the other half of whom are from English-speaking homes. Half of their instruction is provided in Spanish, the other half in English.

This report describes research that was conducted on the achievement in mathematics and in Spanish and English language arts of *Amigos* students and students in control/comparison groups. Also presented are data collected on students' and parents' attitudes toward bilingualism and biculturalism; students' self-assessment of academic competence and self-esteem; teachers' judgment of students' academic competence and self-esteem; and social-interactional patterns among *Amigos* students from different ethnic backgrounds.

INTRODUCTION

The meaning of bilingual education has changed in instructive ways in recent years. In the 1950s, the United States Government enacted the National Defense Education Act (NDEA) in response to the Soviet scoop of space exploration with Sputnik, the first manned satellite. The NDEA stressed the urgent need for American young people not only to catch up with the Soviets in science and technology, but also to develop bilingual/bicultural skills. The belief was that sophistication in languages and cultures would make the nation more effective in international research and commerce and, perhaps most important of all, would help change other peoples' perceptions of Americans; in many quarters of the world, Americans were seen as "ugly" (Lederer & Burdick, 1958) because of their ignorance and disdain of foreign cultures and languages. In that era, then, bilingual education was intended for mainstream Anglophone Americans.

At the present time, bilingual education in the United States has come to signify education for limited-English-proficient (LEP) young people, and it typically involves education in and through English for language minority children. Starting in the 1970s, serious debates were generated about the best way schools might aid LEP students: Should the focus be on intensive all-English instruction, or should some type of maintenance bilingual education be offered, making instructional use of both the home language and English?

There are, therefore, two faces to bilingual education—one for language minorities, the other for mainstream Americans (see Lambert, 1980)—and rarely are the policy makers involved with each type aware of the common and particular features of one another's deliberations. Even more rare are instances where the two types are actually brought into joint operation in one school system or in a single classroom. The program to be described here and the research undertaken to evaluate its effectiveness bring these two faces of bilingualism into an exciting, innovative focus.

BACKGROUND

The bilingual department of the Cambridge (MA) Public Schools currently serves about 1,100 limited-English-proficient students in its various programs. Overall, 42% of the student population of Cambridge, representing 41 different languages, come from homes where a language other than English is spoken. Cambridge has experienced a 30% increase in LEP students over the last 4 years. Students who are native speakers of Portuguese, Cape Verdean, Haitian Creole, Spanish, Chinese, and Korean participate in full-time transitional bilingual education programs, and a new program has been recently implemented for students from Ethiopia. For low-incidence population students, English as a second language (ESL) instruction is provided in small pull-out groups, to help students develop the aural/oral skills they need in their mainstream classes.

For the past several years, Cambridge has operated "controlled choice," a voluntary desegregation plan that requires parents to apply for the schools of their choice. They begin the process during the year before their child is to enter kindergarten. They visit schools, attend informational open houses, and fill out applications for their first, second, and third choice of schools for their child. This makes the process very competitive.

The idea for a new type of program, *Amigos*, began during the 1985-86 school year as a collaborative effort between the Cambridge Public Schools' desegregation and transitional bilingual education departments. Parents, teachers, administrators, and members of the community came together to explore the possibility of developing a program that would combine the best features of transitional bilingual education (for LEP students) and language immersion education (for native English speakers). The committee sought ways to change the isolating character of transitional bilingual education programs, which often segregate limited-English-proficient students from the rest of the school. Planning committee members visited and observed immersion programs in operation, including the Rafael Hernández

School in Boston, the Oyster School in Washington, DC, and the French language immersion program in Holliston, Massachusetts. Pertinent documentation pertaining to the San Diego two-way language immersion program was reviewed and discussed, along with research results of numerous programs of immersion education.

Based on the results of the planning committee's research and observations, a collective decision was made by officials at the state and local level to adopt the two-way bilingual (or two-way immersion) model in Cambridge for the following school year. Everyone involved in the decision, including representatives of the Cambridge bilingual department and desegregation office, the Superintendent of Schools, and the Director of the Office of Equity, was convinced that the two-way model would eliminate the isolation of language minority students, provide them with a rich English-language-learning environment, and support their academic learning. In addition, majority language students would be given the opportunity to learn Spanish with native-Spanish-speaking peer models with no risk to their first language development or their academic achievement.

After a brief recruitment period, the Amigos program commenced in September of 1986.

The Amigos Program

The Amigos two-way bilingual program (also called developmental bilingual or two-way language immersion) currently serves close to 250 public school students from either Spanish-speaking or English-speaking homes. Fifty percent of the students enrolled in Amigos are limited-English-proficient Hispanics, and fifty percent are non-Hispanic English speakers. The program is housed in two locations: the Maynard School for Grades K-3 and the Kennedy School for Grades 4-6.

Providing children with the opportunity to cultivate friendships with children from different ethnic backgrounds is a major focus of the Amigos program. Hispanic students are given the clear message that Spanish language skills need not be exchanged or sacrificed for English skills. Through natural interaction, English speakers learn Spanish from their Spanish-speaking peers, who serve as alternate role models, just as Spanish speakers learn English from their native-English-speaking peer role models. While learning through Spanish and English, the students are given the opportunity to explore, manipulate, and play with language. Spanish is the medium of instruction for 50% of the time, and English is used the other 50%. A Spanish-speaking teacher and an English-speaking teacher maintain separate language environments for the students. Language mixing in the classroom is avoided.

In the not so obvious background, parents have been the backbone of the program. Their involvement extends to making recommendations relative to curriculum, program goals, homework help, and ways to enhance the students' exposure to the second language outside the school. Most importantly, parents define their expectation for program outcomes for their children. During special parent conferences, they serve as workshop presenters and as participants in sessions led by teachers, community members, and other parents involved in the program.

Over the past few years, the program has been experimenting with different models for instructional delivery. Currently, in kindergarten and first grade, students receive instruction in Spanish one day and in English the next. By second grade, students spend one week in Spanish and the next in English. It is argued that the whole week rotation gives the teachers and students the chance to develop comprehensive themes in an extended language immersion environment. These modifications are not permanent and are to be evaluated.

Cambridge has been the recipient of Title VII federal support for the past 2 years. This additional funding has ensured the growth of the Amigos program to Grades 4-6 and has also enabled ongoing teacher training initiatives and curriculum development.

Student progress is monitored through both standardized assessment and portfolio assessment, a multi-tiered process involving the accumulation of

samples of students' work—their writing, drawing, learning logs, and taped readings, along with teachers' miscue analyses and annotated observations of students while they are engaged in learning.

RESEARCH PROCEDURES

The Amigos program has experienced a constant increase in the number of pupils involved, because each year a new kindergarten class is initiated. Thus, yearly augmentations occur that, for purposes of research, function as new follow-up groups (see Table 1). The present report focuses on two sets of classes from kindergarten to Grade 3: one set tested in the spring of 1990 and the second set tested in the spring of 1991. For some analyses, these two sets of pupils are combined, while for other comparisons attention is directed to the year-to-year variability in outcomes. For instance, the report at the end of the 1991-92 academic year will shift the focus to two groups of pupils finishing Grade 4, although follow-up groups at the earlier years will be included so as to test the stability of the K-3 findings highlighted here.

Table 1
The Progression of Amigos Classes*

Year	Grade						
91-92	5th	5	4	3	2	1	K
90-91	4th	4	3	2	1	K	-
89-90	3rd	3	2	1	K	-	-
88-89	2nd	2	1	K	-	-	-
87-88	1st	1	K	-	-	-	-
86-87	K	K	-	-	-	-	-
	Class:	A	B	C	D	E	F

* Data on all classes from 1986 to 1989 are available from the Cambridge Bilingual Education Office

We present first the more substantive information, that is, data on the achievement and performance outcomes in Spanish and English language arts and in one subject matter—mathematics—for pupils in the Amigos program and in comparison/control groups. This report will also compare groups on several other factors: a) bilingual communication skills (as measured by the Cambridge language dominance scale, to be described); b) pupils' attitudes toward becoming bilingual; and c) students' sense of personal competence and their teachers' judgments of their competence. In addition, we will look at social-interactional patterns among children in the Amigos program (i.e., sociometric preferences along ethnic and racial lines, to be described). As the pupils reach Grade 4 and beyond, they will be mature enough for us to explore more fully the attitudinal consequences of the Amigos program. For example, will the program have a favorable impact on the children's developing views of ethnicity and ethnolinguistic pluralism in American communities? How will their own sense of personal identity be affected as their bilinguality develops?

Our plan also calls for the solicitation of parents' views with regard to the value they assign to second language learning and bilingualism in the lives of their children. Preliminary data from parents on these issues are presented in this report.

THE USE OF COMPARISON GROUPS AND THE MATCHING OF PUPILS

Educational research is difficult to carry out because pupils vary so much among themselves for various social and other background reasons. To be of practical use, such research requires that care be taken to control as many sources of student variation as possible. When a new program of education like Amigos is initiated, it has to be systematically assessed and evaluated over a span of academic years—beyond the subjective feelings of those professionally involved, whether enthusiastic supporters or adamant critics. Here we make use of com-

parison or control groups wherever possible, so that the progress of children in the Amigos program can be gauged against where they would likely be if they were in a conventional program. Accordingly, we collected equivalent information from native-English-speaking and native-Spanish-speaking pupils who were in either a conventional all-English public school program or in a standard bilingual education program in the Cambridge district. We used the comparison group data to determine if English-Amigos pupils were on a par in English language skills and arithmetic with English-language comparison children not in the Amigos program. Similarly, we compared the progress of Spanish-Amigos pupils in the development of English and Spanish language skills and mathematics with the progress of Hispanic-background pupils in a standard bilingual education program or, in certain instances, in a conventional all-English program.

There are, of course, many factors that could influence attainment in school subjects and language skills, the most important being social class background differences and differences in basic cognitive or intellectual ability. Accordingly, our comparison classes were chosen to be as similar as possible to Amigos classes in terms of boy/girl composition, social class backgrounds (mainly working-class and lower-middle-class homes and neighborhoods), and intellectual ability. We were able to measure and match pupils in terms of basic intellectual ability by using the *Raven Progressive Matrices* (Raven, 1965), a widely used and acclaimed nonverbal test of abstract reasoning (see Carpenter, Just, & Shell, 1990). Because it is nonverbal, this test circumvents the home language differences involved in comparing Hispanic and Anglo children. It is rare that educational research in American public schools includes a test of this sort. It was possible in this case because of the perspicacity and cooperation of key educators in the Cambridge school system. Thus, when achievement comparisons are made, we can match groups of pupils in the Amigos and comparison groups in terms of Raven test scores. Without this control, it would be extremely difficult to make serious assessments of any innovative (or conventional) program of education.

What this control means in practice is that before actual analyses of school achievement were conducted, a set of procedures was followed at each grade level. First, each Amigo pupil was matched to a control pupil in the relevant control group. That is, native-English-speaking Amigos (English-Amigos) were matched on Raven scores with children in the English control groups; native Spanish-speaking Amigos (Spanish-Amigos) were matched with children in the Spanish control groups. An Amigo was included in the comparison only if a child in the relevant control group with the same Raven's score was included. Because it was difficult to match Raven's scores perfectly between groups, the criteria were relaxed slightly in the following way. An Amigo was included in the sample only if a child in the relevant control group obtained a designation within one half a level. Thus, if a Spanish-Amigo obtained a designation of III, and no Spanish control subject also obtained a III, then any Spanish control subject scoring between III+ and III- inclusive was considered. The only constraint on this approximation procedure was that, if one match was made in which the Amigo had a higher designation than the control subject, then a subsequent approximation was made in the opposite direction. This constraint assured that the average matching designations of the Amigos and the control groups were very close, if not identical.

The matching procedure reduces the size of groups somewhat, and to compensate we will in future reports combine various follow-up classes to augment the size of groups for overall comparisons. This will be possible because there have been few changes in teachers or in the structure of the Amigos program. However, for most analyses reported here, we work with small matched samples except for a few summary tables where we combine over a two-year period and use a statistical procedure to equate groups with respect to the Raven test scores.

TEST MATERIALS

Nonverbal Abstract Thinking Test

The *Raven's Coloured Progressive Matrices Test* was administered to all participating pupils.

Except for simple instructions given orally (in English and/or Spanish), the test does not involve the use of language. In the earlier grades, it is administered to groups of four or five pupils at a time. Pupils are asked to select from a set of six patterns the one that best fits a piece missing from a larger design, much like a jigsaw puzzle completion (see Carpenter, Just, & Shell, 1990). Scores reflect performance in terms of national norms at each age/grade level.

English Language and Mathematics Tests

The reading subtests of the *California Achievement Test* (*CAT*) (1985), with appropriate forms for grade levels, were administered to Amigos and comparison groups in the spring of each academic year by two trained examiners, independent of the teaching staff. In addition, as many groups as practicable were given the mathematics subtests of the *CAT*. The reading subtest assesses performance in phonic analysis (e.g., recognizing sounds of consonant clusters, vowel combinations), English vocabulary, and reading comprehension (containing reading passages typical of those found in students' science, social studies, mathematics, or general reading texts). The two components of the mathematics subtest assess skills at the grade level (e.g., Grade 1 addition and subtraction) and, more generally, skills in understanding and using mathematic concepts and operations. The *CAT* is standardized on same-aged pupils from across the United States, and scores are given for grade level. Because testing is done in March or April of each year, the grade-appropriate averages should be 1.7, 2.7, and 3.7, respectively, for Grades 1, 2, and 3.

Language Assessment Scales (*LAS*). The *LAS* (Duncan & deAvila, 1990) measures proficiency in English reading and writing. We have experimented with the *LAS* with available Grade 2 and 3 pupils, but we have not used this measure systematically because of its content overlap with the *CAT*. The group comparisons that were possible are included in Tables 7a and 8a (pages 15-16).

Spanish Language Tests

The main Spanish language achievement test used was the *California Test of Basic Skills, Español (CTBS Español)*, developed as a Spanish equivalent of the English *CAT*, with a comparable subtest format. All Amigos and Spanish control classes were administered the reading subtest, and as many as possible, depending on the availability of examiners, were given the mathematics subtest. The *CAT* and *CTBS* have grade-appropriate norms; because our testing was done in March and April, the adjusted grade-appropriate means are 1.7, 2.7, and 3.7 for Grades 1, 2, and 3.

Language Dominance Test (Spanish versus English)

In response to the U.S. Office of Education requirement of 1975 that school districts identify and provide appropriate instruction for LEP children, the Cambridge Public School District developed a comprehensive assessment procedure, referred to as the Cambridge *Step by Step Assessment of Language Dominance* (*SSALD*) (1981). The procedure provides a profile of each student's competence in various skill areas of his or her two languages. The test is administered twice, first in the home language and later in English. It includes an oral language interview, in which students are asked to follow complex directions, recall story details, etc.; a reading comprehension test; and a student writing sample.

As typically evaluated, the *SSALD* provides a profile of language dominance, which can range from clear dominance in the home language, to a balance of competence in the home language and English, to clear dominance in English. For our purposes, we will use the actual scores obtained at each grade level on the separate Spanish and English *SSALD* for both Spanish-Amigos and English-Amigos pupils, as well as for the Spanish control pupils. The innovation here is that the test is not normally given to native-English-speaking children. Thus, this interview-based testing procedure (one pupil to one bilingual examiner) will be used as a supplemental gauge of the bilingual progress of the two subgroups of Amigos pupils and of the Spanish controls.

Sociometric Choice Preferences

Sociometric choices are pupils' preference for others in their class with whom they would most like to interact in a variety of social settings. Our research

interest is to determine if Amigos pupils differ from the controls in their choices: Do they select associates from within their own ethnic group, or do they choose on a purely random or chance basis, regardless of ethnicity or race? One might be concerned that the structure of the Amigos program could overemphasize ethnicity, thereby encouraging Hispanic youngsters, for example, to turn to other Hispanic children for friendship. Or the program could marginalize African-American children who might stand out in contrast to Hispanics and Whites and thus turn to their own ethnic group for friendship. These possibilities are tested by means of the Chi-square statistic, which reveals instances where the choices are random rather than biased toward within-ethnic-group preferences. Unfortunately, the comparison groups cannot be similarly tested because they do not offer the same variety of choices among classmates. For instance, the Spanish control group comprises only Hispanic pupils in a bilingual education program, and the English controls include mainly Whites and African-Americans (or other minorities), but few, if any, Hispanic children. The Amigos classes have a nearly 50-50 Hispanic/non-Hispanic split, and the non-Hispanic subset has nearly an even split of majority (mainly White) and minority (mainly African-American) students. Five choices are requested of each child: From among those in your class, who would you like most to *sit next to, play games with, eat lunch with, take home for a party,* and who is *your best friend*?

Personal Competence Measures

Current research on self-esteem indicates the important role it may play in the academic and career success or failure of young people (see Crocker & Major, 1989). In light of this research, pupils in each of our groups were asked to rate themselves in terms of perceived competence (skill at school work, smartness in work, happiness with self and with life, etc.). Separately, teachers rated each student on similar dimensions of competence. We then compared English-Amigos to English control groups and Spanish-Amigos to Spanish control groups on both self- and teachers' ratings. In doing so, we matched groups in terms of Raven test scores in the belief that the competence judgments would be more revealing, because the children involved are essentially equivalent in terms of ability in abstract reasoning—presumably a central feature of a realistic sense of competence in school work, at least. Similar research on the role of perceived competence of LEP students has been conducted by Kathryn Lindholm (see, e.g., Lindholm, 1990a).

Attitudes Toward Bilingualism

A third questionnaire, also being used by Lindholm in her research, was included. It concerns pupils' attitudes toward bilingualism. For instance, does the pupil agree or disagree that learning two languages will help one in school work, make one smarter, help in the field of occupation? Does the pupil enjoy meeting people who speak another language? We were not able to collect data from all pupils, but some comparisons are possible between English-Amigos and English controls and between Spanish-Amigos and Spanish controls.

Parents' Attitudes Toward Multiculturalism

Parents were asked whether they felt that various ethnic and ethnolinguistic groups should assimilate fully to American culture and language or maintain as much as possible their heritage languages and cultures while becoming biculturel/bilingual Americans. The questionnaire used was derived from the work of Lambert and Taylor (1987, 1990). Not all parents in all groups have been contacted, but we have contacted enough of them to permit us to make certain basic group comparisons. For instance, we want to know if parents' attitudes toward multiculturalism versus assimilation as a national policy (see the items presented in Table 3 on page 10) affect their choice of program (such as Amigos or transitional bilingual education) for their children. Our analyses use parental attitudes on this issue as a means of determining whether parental biases exist as the children enter one program or another. In later reports we will also see if parents in the Amigos

program change their attitudes on this issue as their children proceed through higher grades.

GROUP COMPOSITION

In the Cambridge Public Schools, parents choose to place their children in one program or another. The sole restriction is that LEP children have to be served in one or another of the bilingual education offerings available, Amigos included. After several years of experience, we know that the Amigos program sells itself, so to speak, because ample numbers of new families opt for Amigos at the kindergarten year. Others continue to choose the conventional bilingual education offering. We also have learned that very few children leave the Amigos program from year to year and that usually a dropout case is simply a move away from the district. However, parents of older children transferring into the district, especially those from a non-U.S. school system, tend to choose the Amigos alternative. Their children are permitted into the program, where space is available, in any grade up through Grade 3. Transfer cases are very few in number, and for the present report such children are not separated out from the majority, who have been in the same program since kindergarten. In future reports, when we combine groups, we may decide to separate out such transfer students. The Spanish control (or bilingual education) group is different; they comprise mainly LEP pupils as determined by the *SSALD* and must remain in the bilingual program until they have met some minimal exit level in English skills, whereupon they enter a conventional all-English program. Thus, the Spanish control groups have a small number of students transferring out and new LEP children entering at each grade in the elementary years. However, up through Grade 3, our Spanish control group comprises mainly continuing pupils, making it possible to compare scores across groups. From Grade 4 on, however, we may be forced to use grade norms for certain analyses, while we continue to search for other modes of making matched control-group comparisons.

Description of Groups

Table 2 (page 8) gives an overview of the classes included in this report: their size, ethnolinguistic composition, boy/girl ratios, and the district's "Lau classification" of each student—an index of proficiency in English relative to Spanish, formed by combining the separate English and Spanish scores on the *SSALD*, described earlier.

School settings

The Maynard/Kennedy Schools, which house the Amigos program and the English controls, are situated in working-class neighborhoods with a high incidence of students on free or reduced lunch. Students are entitled to free or reduced lunch if their family's total income meets specific federal income eligibility requirements. There is a yearly procedure for random income verification. The Amigos and English controls are similar in terms of the number of students who receive a free or reduced lunch. The percentages of pupils on free or reduced lunch for the 1990-91 year are as follows:

	Grade 1	Grade 2	Grade 3
Amigos	61%	58%	62%
English Controls	60%	50%	65%
Spanish Controls	71%	74 %	50%

Most pupils in all three groupings come from working-class homes; only a minority are from middle-class backgrounds. A sample of parental occupations for all groups includes factory workers, hotel/office cleaners, salespeople, restaurant workers, teachers, and hospital workers. With the increasing popularity of the Amigos program among parents, there has recently been a higher incidence of English-speaking students from more affluent backgrounds. However, such students represent less than 20% of the total, because the program entry requirements for English-speaking children favor a balance between majority and minority (mainly African-American) children.

Many of the Spanish controls attend the Longfellow School, which is located in a more upscale middle-class neighborhood. However, the

Table 2
Group Composition Statistics: Grades 1 to 3

1989-90 Cohorts

	Sample Size[a]	Male/ Female	Ethnicity[b] Black	White	Hispanic		Lau Classification[c] 1	2	3	4	5
Grade 1											
						EA	0	0	3	4	12
Amigos:	32	14/18	8	11	13	SA	0	1	9	3	0
English Control:	37	17/20	20	16	0		-	-	-	-	-
Spanish Control:	14	8/6	0	1	14		3	6	6	0	0
Grade 2											
						EA	0	0	1	3	7
Amigos:	26	12/14	3	8	15	SA	0	2	10	2	1
English Control:	41	20/21	19	22	0		-	-	-	-	-
Spanish Control:	20	9/11	0	0	20		1	6	12	0	0
Grade 3											
						EA	0	0	4	3	4
Amigos:	20	9/11	4	7	9	SA	0	0	8	1	0
English Control:	39	29/10	19	16	4		-	-	-	-	-
Spanish Control:	10	7/3	0	0	10		4	4	2	0	0

1990-91 Cohorts

	Sample Size[a]	Male/ Female	Ethnicity[b] Black	White	Hispanic		Lau Classification[c] 1	2	3	4	5
Grade 1											
						EA	0	1	0	6	13
Amigos:	45	23/22	6	12	26	SA	0	18	2	2	2
English Control:	20	12/7	10	8	1		-	-	-	-	-
Spanish Control:	21	10/11	0	0	21		3	8	10	0	0
Grade 2											
						EA	0	2	4	11	0
Amigos:	32	14/18	6	11	15	SA	0	6	7	2	0
English Control:	40	19/21	14	20	6		-	-	-	-	-
Spanish Control:	15	8/7	0	0	15		0	3	11	1	0
Grade 3											
						EA	0	1	0	8	0
Amigos:	24	12/12	2	7	15	SA	0	4	9	2	0
English Control:	18	7/11	12	4	2		-	-	-	-	-
Spanish Control:	7	4/3	0	0	7		0	2	4	1	0

a Average class size for all programs was approximately 19 pupils; higher numbers mean more than one class is involved; however, fewer pupils are available for Spanish control purposes, especially in higher grades.

b Black also includes other non-Hispanic minorities. Entries do not always total to class size totals; if ethnicity was not evident, the pupil was not included in the statistical analyses.

c Lau classification scores: 1 = clear Spanish dominance, 3 = balanced bilinguality, and 5 = clear English dominance; EA = English-Amigos; SA = Spanish-Amigos.

Spanish controls are similar to the Amigos and English controls in terms of socioeconomic background, including the occupations of the parents.

CLASS SIZES

The average Amigos class size is about 19 students, which is similar to the average for the English control classes. The Spanish controls have similar student numbers in kindergarten and Grade 1 but many fewer students in Grades 2 through 6, because fewer students enter that program in the later grades.

THE ISSUE OF DROP-OUTS

The most prevalent reason for students' leaving the Amigos program is the family's decision to move from Cambridge to another location. There have been very few dropouts (fewer than 5 that we know of) due to dissatisfaction with the program.

The Cambridge School Department continues to explore ways to help parents understand the program goals of Amigos, especially in terms of expected student outcomes. This is important in order to avoid unrealistic expectations on the part of the parents and to have them understand that the program necessitates a long-term commitment.

Summary

Overall, the Amigos classes have a good balance of Hispanic and Anglophone pupils at each level; the English controls include very few Hispanic pupils and thus a greater proportion of other minority (mainly African-American) children; the Spanish control classes have essentially only Hispanic children. The *SSALD* scores indicate that, in the course of the three years, both the Spanish-Amigos and the Spanish controls move from Spanish dominance to a more balanced bilinguality. Interestingly, the English-Amigos children also show some movement from clear English dominance toward the early stages of bilinguality.

RESULTS

Parents' Attitudes Toward Multiculturalism in America

Tables 3-5 (pages 10-12) present the questions asked of parents and their responses. Responses were given using a 7-step scale, ranging from 1 (strongly disagree) to 7 (strongly agree). So far, we have information on a good number of Amigos parents but only a few in the English control group and none in the Spanish control. Nonetheless, certain trends are clear.

The themes built into the questions (see Lambert & Taylor,1990, Chapter 2) provide the respondent with examples of both favorable and unfavorable aspects of cultural/linguistic maintenance and cultural/linguistic assimilation to American norms. Respondents are forced by the format to be consistent; that is, if they favor multiculturalism, for instance, they should agree with favorable statements about it and disagree with unfavorable statements.

One purpose was to use this attitude measure to determine whether the Amigos parents were comparatively more in favor of culture/language maintenance, thereby biasing the Amigos program with a distinctive family attitude toward bilingual education. Within the limits of the data available, there are no sharp contrasts apparent in the parents' response. Thus, in Table 3, Amigos and English control parents generally agree that giving up traditional ways (heritage cultural values and language) would not necessarily disunify the nation (the first three questions); both groups also agree that heritage cultural abandonment would be a loss to the nation (the second three questions). Similarly, both sets of parents show some concern that cultural maintenance could hamper communication and common understanding (on the third set of three questions, where the average responses are close to the neutral, "not sure" position), but finally are generally favorable to multicultural heritage maintenance (the final set of three questions) by agreeing that a nation profits from a diversity of cultural and racial resources.

Table 3

Parents' Attitudes Toward Multiculturalism: First Grade Cohorts, 1990-91

If cultural/ethnic minority groups *give up* their traditional ways, it means (1 = disagree, 7 = agree) . . .

	Amigos Parents	English Control Parents	F-Ratios
. . . that all people living in America will have a common base for understanding each other.	2.64 (25)	1.60 (5)	0.87, $p = 0.36$
. . . that the same language and cultural standards will exist for all Americans.	2.36 (25)	2.60 (5)	0.05, $p = 0.83$
. . . that America will be unified and cohesive.	3.08 (24)	1.40 (5)	2.12, $p = 0.12$
. . . that people will be robbed of a very important part of their personal identity.	5.00 (25)	7.00 (5)	2.59, $p = 0.12$
. . . that people will have been forced to give up something valuable, and this will make them hostile toward others.	5.04 (25)	7.00 (5)	2.62, $p = 0.12$
. . . that the nation loses the best that different cultural and racial groups have to offer.	5.09 (23)	6.40 (5)	1.04, $p = 0.32$

If cultural/ethnic minority groups *maintain* their traditional ways, it means (1 = disagree, 7 = agree) . . .

	Amigos Parents	English Control Parents	F-Ratios
. . . that people living in America will not have a common base for understanding each other.	3.52 (23)	3.20 (5)	0.06, $p = 0.81$
. . . that there will be different languages and cultural standards throughout America.	5.04 (24)	4.75 (4)	0.05, $p = 0.83$
. . . that America will be divided into segmented units.	3.09 (23)	2.20 (5)	0.49, $p = 0.49$
. . . that people will be allowed to express an important part of their identify.	6.04 (25)	7.00 (5)	1.13, $p = 0.30$
. . . that people will feel secure in their group identity and this will make them open and sympathetic to other groups.	5.96 (25)	6.00 (5)	0.00, $p = 0.97$
. . . that the nation can keep the best that different cultural and racial groups have to offer.	6.36 (25)	7.00 (5)	0.53, $p = 0.47$

Table 4

Parents' Attitudes Toward Multiculturalism: Second Grade Cohorts, 1990-91

If cultural/ethnic minority groups *give up* their traditional ways, it means (1 = disagree, 7 = agree) . . .

	Amigos Parents	English Control Parents	F-Ratios
. . . that all people living in America will have a common base for understanding each other.	2.96 (24)	3.46 (13)	0.46, $p = 0.50$
. . . that the same language and cultural standards will exist for all Americans.	2.54 (24)	2.92 (13)	0.25, $p = 0.62$
. . . that America will be unified and cohesive.	3.04 (24)	3.00 (13)	0.00, $p = 0.96$
. . . that people will be robbed of a very important part of their personal identity.	5.13 (24)	4.39 (13)	0.65, $p = 0.42$
. . . that people will have been forced to give up something valuable, and this will make them hostile toward others.	4.39 (23)	4.00 (13)	0.22, $p = 0.64$
. . . that the nation loses the best that different cultural and racial groups have to offer.	4.79 (24)	5.25 (12)	0.25, $p = 0.62$

If cultural/ethnic minority groups *maintain* their traditional ways, it means (1 = disagree, 7 = agree) . . .

	Amigos Parents	English Control Parents	F-Ratios
. . . that people living in America will not have a common base for understanding each other.	2.92 (24)	2.77 (13)	0.57, $p = 0.45$
. . . that there will be different languages and cultural standards throughout America.	4.00 (24)	5.31 (13)	2.57, $p = 0.12$
. . . that America will be divided into segmented units.	2.46 (24)	2.83 (12)	0.39, $p = 0.64$
. . . that people will be allowed to express an important part of their identify.	6.13 (24)	5.92 (13)	0.12, $p = 0.73$
. . . . that people will feel secure in their group identity and this will make them open and symphathetic to other groups.	5.44 (23)	4.92 (13)	0.55, $p = 0.46$
. . . that the nation can keep the best that different cultural and racial groups have to offer.	6.00 (24)	5.77 (13)	0.55, $p = 0.46$

Table 5

Parents' Attitudes Toward Multiculturalism: Third Grade Cohorts, 1990-91

If cultural/ethnic minority groups *give up* their traditional ways, it means (1 = disagree, 7 - agree) . . .

	Amigos Parents	English Control Parents	F-Ratios
. . . that all people living in America will have a common base for understanding each other.	2.50 (10)	3.86 (7)	1.64, $p = 0.22$
. . . that the same language and cultural standards will exist for all Americans.	2.40 (24)	4.86 (7)	4.96, $p = 0.04$*
. . . that America will be unified and cohesive.	2.44 (9)	5.00 (7)	5.13, $p = 0.04$*
. . . that people will be robbed of a very important part of their personal identity.	5.40 (10)	4.38 (7)	0.76, $p = 0.40$
. . . that people will have been forced to give up something valuable, and this will make them hostile toward others.	5.20 (23)	3.00 (7)	3.19, $p = 0.09$
. . . that the nation loses the best that different cultural and racial groups have to offer.	4.70 (10)	4.86 (7)	0.02, $p = 0.90$

If cultural/ethnic minority groups *maintain* their traditional ways, it means (1 = disagree, 7 = agree . . .

	Amigos Parents	English Control Parents	F-Ratios
. . . that people living in America will not have a common base for understanding each other.	2.50 (10)	2.14 (7)	0.12, $p = 0.73$
. . . that there will be different languages and cultural standards throughout America.	5.30 (10)	4.14 (7)	1.02, $p = 0.33$
. . . that America will be divided into segmented units.	2.90 (10)	3.00 (7)	0.01, $p = 0.93$
. . . that people will be allowed to express an important part of their identity.	6.40 (10)	4.71 (7)	3.14, $p = 0.10$
. . . that people will feel secure in their group identity and this will make them open and sympathetic sympathetic to other groups.	6.20 (10)	4.14 (7)	4.80, $p = 0.04$*
. . . that the nation can keep the best that different cultural and racial groups have to offer.	6.60 (24)	5.00 (8)	3.47, $p = 0.08$

*Mean differences are significant at or beyond the .05 level of confidence.

Note: On all following tables, * = significant at or beyond the .05 level of confidence, and ** = significant at or beyond the .01 level of confidence.

There are some signs that the parents of children in Grade 3 may have a somewhat different overall attitude; the Grade 3 Amigos parents are more favorable than K-2 Amigos parents (statistically significant or close to significance) toward cultural maintenance and less convinced that giving up heritage cultures would make America more unified. Although only a trend with the data available, it will be worthwhile in future reports to search explicitly for possible changes in parents' attitudes as a function of the time their children have been enrolled in Amigos. At the Grade 1 level, however, there are no indications that the Amigos parents' views toward multiculturalism, favorable as they appear, are any different from the views of English control parents.

Academic Achievement

The evaluation of the Amigos pupils' achievement consists of comparisons with native-English- and native-Spanish-speaking control groups. The English-Amigos are compared with English controls and, separately, the Spanish-Amigos with Spanish controls; each pair of groups compared is matched in terms of Raven scores. English language achievement and English-based math achievement are determined by scores on the *California Achievement Test,* for each grade level, and are presented in Tables 6a, 7a, and 8a (pages 14-16). Achievement in Spanish language skills and Spanish-based math are tested with the *CTBS Español* (see Tables 6b, 7b, and 8b on pages 17-19).

English reading and English-based math achievement: English-Amigos versus English controls

Overall, these two groups perform very much alike. First, both score at grade level or above (where 1.70, 2.70, and 3.70 are expected for spring testing results for Grades 1 to 3) except at Grade 1, where, for the 1990-91 cohorts, both are a bit below the norms. Moreover, both groups progress regularly from year to year in English reading competence. However, the English-Amigos generally score higher than the controls, significantly so at the Grade 2 level, where the English-Amigos mean is far above the norm (5.00 plus). It is noteworthy that there is much class-to-class variability in performance when the two cohorts are compared, which is difficult to explain since the curriculum, the teachers involved, the examiners, and the community pool of children are essentially constant. This variability appears throughout the report and is a common, albeit not well understood, event in educational research. It prompts researchers, wherever feasible, to collect data on numbers of follow-up cohort groups and to combine cohorts in analyses.

In summary, the English-Amigos children are progressing normally in English language development, staying at the same level as or above Raven-matched English-speaking controls. There is no evidence that the Amigos program—which offers only half the instructional time in English—places the English-Amigos youngsters at any disadvantage compared to English controls who follow an all-English curriculum.

English reading and English-based math: Spanish-Amigos versus Spanish controls

The Spanish-Amigos group is slightly below the expected grade norms in English reading in four of six instances, but above the norms in two instances (mean scores of 3.11 instead of 2.70 expected at Grade 2, and 4.65 instead of 3.70 expected at Grade 3). In all instances, they score higher than the Spanish controls on English reading and significantly above the controls in three of the six comparisons. Similarly, the Spanish-Amigos outperform the Spanish controls in English-based tests of mathematics, significantly so in three out of six comparisons.

In summary, the Spanish-Amigos pupils are only slightly below the national norms for competence in Engiish reading and at the norm level for mathematics achievement (measured through a test given in English), and in general they outperform matched groups of Hispanic pupils whose bilingual curriculum emphasizes much more English instruction as a preliminary to mainstreaming into all-English programs. Thus, giving only half time to English instruction while devoting equal time to home language development—

Table 6a

English Language Achievement: Grade 1, 1989-90 and 1990-91 Cohorts

A. Anglophone Pupils	1989-90 Cohorts		1990-91 Cohorts	
	English Amigos	**English Controls**	**English Amigos**	**English Controls**
English **reading:**				
C.A.T. mean scores (SD)	1.92 (.80)	1.84 (.26)	1.30 (.48)	1.66 (.33)
Sample size	15	15	8	8
Raven classification[a]	II/III+	II/III+	II/III+	II/III+
Test of significance:	$F(1,28) = .14$ $p = .70$		$F(1,14) = 3.12$ $p = .09$	

B. Hispanic Pupils	1989-90 Cohorts		1990-91 Cohorts	
	Spanish Amigos	**Spanish Controls**	**Spanish Amigos**	**Spanish Controls**
English **reading:**				
C.A.T. mean scores (SD)	1.38 (.17)	0.95 (.73)	1.29 (.43)	0.69 (.49)
Sample size	8	8	12	12
Raven classification	III+/III	III+/III	III+/III	III+/III
Test of significance:	$F(1,14) = 2.56$ $p = .13$		$F(1,22) = 10.25$ $p = .004^{**}$	

a The Raven scores are classified in terms of abstract thinking capacity as follows: I = superior performance; II = definitely above average; III = average; IV = below average; and V = clearly below average.

the case of the Spanish-Amigos groups—has promoted better (and essentially native-like) competence in English reading skills relative to the Spanish control groups. Moreover, the program appears to have promoted better working knowledge of English, that is, a higher level of application of English to the understanding and use of English in the domain of mathematics than is the case for the Spanish controls.

Spanish reading and mathematics achievement: English-Amigos

The English-Amigos group progresses from year to year in Spanish reading competence, although they are somewhat below grade norms. This is most apparent at Grade 3. (The means are 2.06 and 2.77 for the two cohorts, where 3.70 is the expected norm for native-Spanish-speaking pupils.) However, on the Spanish math tests (*CTBS Español*), they score consistently above grade norms and above the Spanish-Amigos group. (Note, however, that there is no Raven score matching when Spanish-Amigos and English-Amigos means are compared.) Overall, the English-Amigos pupils appear to be progressing well in Spanish, especially in the capacity to learn through Spanish and to apply it to the domain of mathematics; in that case they are on a par with native speakers of Spanish.

Spanish reading and math achievement: Spanish-Amigos versus Spanish controls

In the Spanish reading test, the Spanish-Amigos groups score above the norms for Grade 1 and slightly below at Grades 2 and 3. Compared to the Spanish control groups, they score higher at Grades 1 and 2 but lower (although not significantly) at Grade 3. Similarly, on the math test, Spanish-Amigos score higher than the Spanish controls in all instances, significantly so at the Grade 1 level. Thus as a group, the Spanish-Amigos show a relatively strong capacity to learn math concepts through Spanish and to apply Spanish to the domain of math.

The performance of the Spanish-Amigos groups relative to the Spanish controls suggests that the Grade 2 to 3 period may pose challenges with regard to basic cultural/linguistic identity for language minority pupils. In this two-year period, the Spanish-Amigos pupils excel in

Table 7a

English Language Achievement: Grade 2, 1989-90 and 1990-91 Cohorts

A. Anglophone Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	English Amigos	**English Controls**	**English Amigos**	**English Controls**
English **reading:**				
C.A.T. mean scores (SD)	2.90 (1.15)	3.07 (0.80)	5.09 (2.07)	3.05 (1.21)
Sample size	9	9	15	15
Raven classification	II	II	II	II
Test of significance:	F (1,16) = 0.13 p = 0.72		F (1,28) = 10.77 p = .003**	
English **math:**				
C.A.T. mean scores (SD)			5.12 (0.86)	2.92 (0.71)
Sample size	N/A		9	9
Raven classification			II	
Test of significance:			F (1,16) = 35.30 p = .0001**	

B. Hispanic Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	Spanish Amigos	**Spanish Controls**	**Spanish Amigos**	**Spanish Controls**
English **reading:**				
C.A.T. mean scores (SD)	2.07 (0.71)	1.92 (0.53)	3.11 (1.16)	1.56 (0.52)
Sample size	10	10	10	10
Raven classification	III+	III+	III-	III-
Test of significance:	F (1,18) = 0.29 p = 0.60		F (1,18) = 14.92 p = .001**	
English **math:**				
C.A.T. mean scores (SD)	2.07 (0.89)	2.38 (0.41)	3.86 (0.71)	2.16 (0.48)
Sample size	10	10	10	10
Raven classification			II	II
Test of significance:	F (1,18) = 1.00 p = 0.33		F (1,18) = 38.54 p =.0001**	
L.A.S. total score (SD)	N/A		2.48 (73.08)	145 (70.14)
Sample size			8	8
Raven classification			III-	III-
Test of significance:			F (1,14) = 8.23 p = 0.01**	

English achievement but possibly at some expense to the development of Spanish. That is, if the Spanish controls indicate where the Spanish reading achievement norms lie, then the Spanish-Amigos are somewhat below those norms; at the same time, they are at the norms and they score above the controls in Spanish math achievement, which calls for skill in working in and applying Spanish to an important academic subject matter. The suggestion is that the Spanish-Amigos are accommodating to the opportunities they have to be bilingual and bicultural. During the same two-year period, the Spanish control pupils have clearly slipped appreciably below the grade norms and the pace set by the Spanish-Amigos in English language development and in the application of English to math concepts and problems. Possibly the Spanish controls face another type of challenge to their cultural/linguistic identity. They are preparing for mainstream education in English, and it could be that this prospect puts them

Table 8a

English Language Achievement: Grade 3, 1989-90 and 1990-91 Cohorts

A. Anglophone Pupils	1989-90 Cohorts		1990-91 Cohorts	
	English Amigos	**English Controls**	**English Amigos**	**English Controls**
English **reading:**				
C.A.T. mean scores (SD)	5.15 (2.44)	3.99 (2.45)	5.08 (1.86)	4.70 (1.97)
Sample size	8	8	6	6
Raven classification	III+	III+	II	II
Test of significance:	$F(1,14) = 0.90$, $p = 0.36$		$F(1,10) = 0.12$, $p = 0.73$	
English **math:**				
C.A.T. mean scores (SD)	3.43 (0.97)	2.83 (0.45)	5.45 (3.41)	4.87 (0.77)
Sample size	8	8	6	6
Raven classification	III+	III+	II	II
Test of significance:	$F(1,14) = 2.53$, $p = 0.13$		$F(1,10) = 0.17$, $p = 0.69$	

B. Hispanic Pupils	1989-90 Cohorts		1990-91 Cohorts	
	Spanish Amigos	**Spanish Controls**	**Spanish Amigos**	**Spanish Controls**
English **reading:**				
C.A.T. mean scores (SD)	4.65 (2.58)	1.48 (0.26)	2.87 (1.44)	2.14 (0.47)
Sample size	6	6	7	7
Raven classification	III+	III+	III+	III+
Test of significance:	$F(1,10) = 8.94$, $p = 0.01$**		$F(1,12) = 1.61$, $p = 0.23$	
English **math:**				
C.A.T. mean scores (SD)	3.52 (1.04)	2.35 (0.24)	3.94 (2.23)	2.66 (0.29)
Sample size	6	6	7	7
Raven classification	III+	III+	III+	III+
Test of significance:	$F(1,10) = 7.19$, $p = 0.02$*		$F(1,12) = 2.28$, $p = 0.16$	
L.A.S. total score	N/A		279.25 (48.64)	204.75 (64.61)
Sample size			4	4
Raven classification			III+/III	III+/III
Test of significance:			$F(1,6) = 3.39$, $p = 0.12$	

at a comparative disadvantage in mastering the needed English skills. The results from Grade 4 on will be particularly informative, for then we can explore further how all groups—the Amigos and the controls—proceed in their bicultural/bilingual education.

Finally, a separate measure of English language achievement, the *Language Assessment Scale (LAS)*, was administered, once with Grade 2 cohorts and once with Grade 3 cohorts. On this measure the Spanish-Amigos groups scored higher than the matched Spanish controls at both year levels, significantly higher at Grade 2.

Overall Summary of Academic Achievement

To help integrate the findings presented so far and to highlight general trends, Figure 1 (page 20) was constructed by combining the data from the two

Table 6b

Spanish Language Achievement: Grade 1, 1989-90 and 1990-91 Cohorts

A. Anglophone Pupils

	1989-90 Cohorts	1990-91 Cohorts
	English Amigos	**English Amigos**
Spanish **reading:**		
C.T.B.S. mean scores	1.91 (.29)	1.64 (.28)
Sample size	12	9
Raven classification	III+	I
Test of significance:	(not calculated; no relevant controls available)	
Spanish math:		
C.T.B.S. mean scores		2.08 (.45)
Sample size	N/A	9
Raven classification		I
Test of significance:		(not calculated)

B. Hispanic Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	Spanish Amigos	**Spanish Controls**	**Spanish Amigos**	**Spanish Controls**
Spanish **reading:**				
C.T.B.S. mean scores	1.97 (.17)	1.90 (.36)	1.94 (.37)	1.30 (.65)
Sample size	7	7	8	8
Raven classification	III+	III+	III+	III+
Test of significance:	$F(1,12) = .23$ $p = 0.64$		$F(1,14) = 5.64$ $p = 0.03^*$	
Spanish **math:**				
C.T.B.S. mean scores			1.86 (.64)	1.08 (.56)
Sample size	N/A		8	8
Raven classification			III+	III+
Test of significance:			$F(1,14) = 6.90$ $p = 0.02^*$	

cohorts of pupils at each grade level. In calculating the overall means, the size of samples of each cohort is given appropriate weights. This figure simply integrates the results already discussed. For instance, on the English *CAT*, the generally better performance of the English-Amigos over the English controls is apparent, as are the steady, above-norm progress made by the Spanish-Amigos in English achievement and, by Grade 3, the noticeable drop away from the norms on the part of the Spanish controls. Similarly, on the English-based math tests, both the English- and Spanish-Amigos outperform the Spanish controls, indicating that the Spanish-Amigos are apparently better able than the matched Spanish controls to learn through and apply English to a subject matter like math.

On the Spanish language tests, we note for the English-Amigos a slow but steady progress in Spanish reading skills, and a well developed ability to learn math through Spanish and to work in Spanish on tests of math. We also see the regular progress made by the Spanish-Amigos in both Spanish reading and math. Since the Spanish-Amigos score somewhat below the Spanish controls in Spanish reading, the challenge for the Amigos program in the years to come is to provide opportunities for the Spanish-Amigos pupils to strengthen their Spanish skills even further.

Overall, the outcomes suggest that the Amigos experience promotes a solid balance of English and Spanish skills for both the Spanish-Amigos and the English-Amigos pupils. Neither group shows any signs of losing out in the development of home language skills as they progress toward functional bilinguality and biculturality. In contrast, there are some suggestions that the Spanish control pupils, in their program of transitional bilingual education, may,

Table 7b

Spanish Language Achievement: Grade 2, 1989-90 and 1990-91 Cohorts

A. Anglophone Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	English Amigos	**English Controls**	**English Amigos**	**English Controls**
Spanish **reading:**				
C.T.B.S. mean scores	2.00 (0.42)	-	2.36 (0.58)	-
Sample size	9	-	17	-
Raven classification	II		II	
Test of significance:	(No English control group could handle the test)			
Spanish **math:**				
C.T.B.S. mean scores	3.13 (0.65)	-	3.01 (0.41)	-
Sample size	9		17	
Raven classification	II+		II	
Test of significance:	(No English control group could handle the test)			

B. Hispanic Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	Spanish Amigos	**Spanish Controls**	**Spanish Amigos**	**Spanish Controls**
Spanish **reading:**				
C.T.B.S. mean scores	2.26 (0.75)	2.29 (0.60)	2.63 (0.79)	2.02 (0.62)
Sample size	10	10	10	10
Raven classification	III+	III+	III-	III-
Test of significance:	$F(1,18) = 0.01$, $p = 0.92$		$F(1,18) = 3.68$, $p = 0.07$	
Spanish **math:**				
C.T.B.S.. mean scores	2.24 (0.68)	2.13 (0.27)	2.70 (0.38)	2.24 (0.55)
Sample size	9	9	10	10
Raven classification	III-	III-	III-	III-
Test of significance:	$F(1,16) = 0.21$, $p = 0.66$		$F(1,18) = 4.71$, $p = 0.04$*	

by Grade 3, be on a less profitable course. Their program may hamper full bilingual/bicultural development. One possibility is that they have been prepared to be mainstreamed into all-English programs where little further academic support for Spanish language and culture growth can be expected.

One question left unanswered is the following: How far have the English-Amigos pupils come, by Grade 3, in Spanish achievement? We have no appropriate control groups that could be used to determine where they stand. However, we can compare them directly with the Spanish-Amigos group to get a rough idea of how far from native-like their performance actually is. In Table 9 (page 22), we have taken the 1990-91 cohorts of Spanish- and English-Amigos at Grade 3, matched them in terms of the Raven scores, and compared their scores on the Spanish reading and math tests. On the Spanish reading test, as would be expected, the Spanish-Amigos outperform the English-Amigos (although not significantly so), while on the Spanish math test, the English-Amigos outperform the Spanish-Amigos, again not significantly. In sum, then, the English-Amigos appear to be making substantive progress in Spanish, enough so that, in terms of working Spanish, they are becoming competitive with native speak-

Table 8b

Spanish Language Achievement: Grade 3, 1989-90 and 1990-91 Cohorts

A. Anglophone Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	English Amigos	**English Controls**	**English Amigos**	**English Controls**
Spanish **reading:**				
C.T.B.S. mean scores	2.06 (0.66)	-	2.77 (1.50)	-
Sample size	7	N/A	9	NA
Raven classification	III+/II		III+/II	
Test of significance:	Not performed		Not performed	
Spanish **math:**				
C.T.B.S. mean scores	3.20 (1.72)	-	4.87 (1.75)	-
Sample size	9		7	N/A
Raven classification	III+		II	
Test of significance:	Not performed		Not performed	

B. Hispanic Pupils

	1989-90 Cohorts		1990-91 Cohorts	
	Spanish Amigos	**Spanish Controls**	**Spanish Amigos**	**Spanish Controls**
Spanish **reading:**				
C.T.B.S. mean scores	3.66 (2.12)	4.84 (1.19)	3.11 (1.07)	3.63 (1.24)
Sample size	5	5	7	7
Raven classification	III	III	III+	III+
Test of significance:	$F(1,8) = 1.18$, $p = 0.31$		$F(1,12) = 0.69$, $p = 0.42$	
Spanish **math:**				
C.T.B.S.. mean scores	4.02 (1.50)	3.94 (1.02)	3.30 (1.05)	3.04 (0.53)
Sample size	5	5	7	7
Raven classification	III	III	III+	III+
Test of significance:	$F(1,8) = 0.01$, $p = 0.92$		$F(1,12) = 0.33$, $p = 0.57$	

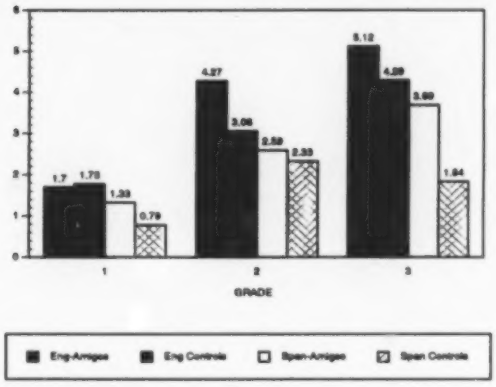
ers of the language. But in time we would also like to compare them with native-Spanish-speaking peers (say in Puerto Rico or Mexico) who are not in any form of bilingual education.

Performance in English and Spanish on the SSALD

As described earlier, the Cambridge Public School District has developed the *SSALD*, a comprehensive measure of each LEP student's communication skills in their heritage language (in the present case, Spanish) relative to English. The *SSALD* consists of an interview-type assessment between a single student and an adult examiner (in the present case, a district staff member working completely independently of the teaching and research personnel). For this research, the procedure was extended to include the English-Amigos pupils along with the Spanish-Amigos and the Spanish controls. We concentrate here on the separate Spanish and English scores. The raw score means are given in Table 10 (page 23) and are summarized in Figure 2 (page 23).

Several trends are noteworthy. Most important of all is the fact that the *SSALD*—different in purpose, format, and mode of administration—produces essentially the same results as the *CAT* and *CTBS*

Figure 1A
English Reading Scores on *C.A.T.*
Combined Cohorts (1989-90 and 1990-91)*



*Plot points in Figures 1A-D indicate weighted, grade-appropriate mean scores, based on the data presented in Tables 6-8. The Grade 1 C.T.B.S. math scores in Figure 1D are based on single cohorts only.

Figure 1B
Spanish Reading Scores on *CTBS Español*
Combined Cohorts (1989-90 and 1990-91)

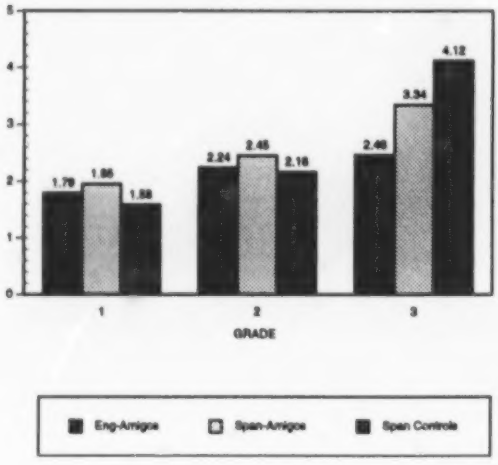


Figure 1C
Math Scores on *C.A.T.*
Combined Cohorts (1989-90 and 1990-91)

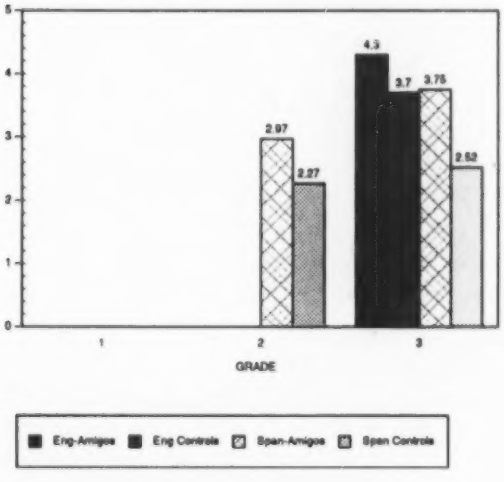
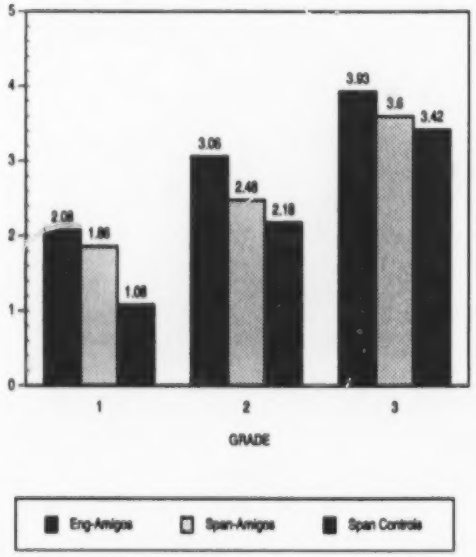


Figure 1D
Math Scores on *CTBS Español*
Combined Cohorts (1989-90 and 1990-91)



Español. For instance, we note again the superior performance in English skills of the English-Amigos children (although it was not possible to have the English controls take the *SSALD*). Moreover, year-to-year progress in the English skills of the Spanish-Amigos children is apparent, reaching a near native-like level at Grade 3. Then, we note a sharp drop away at Grade 3 of the Spanish control children, and this downswing is statistically significant. (See, in Table 10, the group x grade interaction for the comparison of Spanish-Amigos and Spanish control means.) In contrast, the Spanish-Amigos display a parallel steady progress in their Spanish skills; although they score somewhat lower than the Spanish controls in Spanish skills at Grades 1 and 2, at Grade 3 the controls fall at the same level as the Spanish-Amigos. This suggests that the Spanish controls are no different from the Spanish-Amigos in Spanish competence at Grade 3, at least not on this more personalized, more interactive assessment, even though they scored higher (although not significantly so) on the *CTBS Español* reading subtest.

In summary, the alternate and quite different measures of achievement levels in English and in Spanish provided by the *SSALD* confirm the group-to-group comparisons found with the more standard *CAT* and *CTBS Español* measures, thereby increasing our confidence in the general trends obtained.

SOCIAL AND PSYCHOLOGICAL FEATURES OF AMIGOS EDUCATION

A comprehensive evaluation of an innovative educational program certainly entails more than a focus on particular academic outcomes associated with the program. In the present case, however, emphasis on language skills, particularly on bilingual skills, signifies more than academic progress: For the Spanish-Amigos, becoming bilingual means becoming comfortable in the national language without losing the heritage language or links with the ancestral culture. For the English-Amigos, becoming bilingual signifies personal enrichment and knowledge about a new and powerful segment of American society.

Nonetheless, to be useful, the evaluation of the Amigos program should look beyond academics and languages to the social and psychological consequences. What we accomplished here is just a start, because only in the next few years will we be able to probe fully the attitudes and feelings of more mature young people as they reach Grade 4 and beyond.

In-group versus Out-group Preferences

Here the interest is in the social networks that become established in classrooms. The basic question is this: Do the Amigos children segregate themselves along ethnic or racial lines? For instance, do the Hispanic pupils prefer to associate with other Hispanics—the old notion of seeking comfort with one's own kind—or do they become ethnic- and color-blind due to the constant classroom interaction with subsets of minority children (mainly African-American) and Anglos (White students whose home language is English)? As described earlier, we rely on a statistic (Chi-square) to decide if the within-group versus out-group preferences are at a chance level only, or if a statistically reliable clustering is apparent. Other questions are also embedded: If Hispanic children are comfortable mainly with other Hispanics, would this marginalize other minority children (such as African-Americans), coercing them to choose friends within their own ethnic group? And what is the situation of Anglos in such a scenario?

The base data are summarized in Table 11 (pages 26- 27), with illustrative Chi-square analyses displayed in those cases where a significant departure from random/chance preference choices occurred. Several trends are noteworthy. First, there are relatively few instances where the preference choices are not random, that is, most choices are determined less by ethnicity than by the mere number of children in each ethnic category. When ethnic biases appear, they occur most frequently at the Grade 2 level (3 out of 5 significant occurrences). Biases appear for selective types of interaction, not others. Of special interest in this research is the fact that there were no ethnic biases on the important question about students' best friend in class; chil-

dren at all grade levels chose their best class friend without an ethnic or racial bias. The biases occur on issues of eating lunch with, sitting next to, and inviting home for a party, suggesting that these types of interaction are especially determined in an ethnic framework. For example, observers often note on visits to public schools in America that ethnic lunch tables and ethnic "hang-out spots" at recess become quasi sacred and exclusive.

Of interest is the actual form or nature of the biases that were uncovered. In all but one of the statistically significant cases, the majority group children tended to favor their own group (within-group bias) at the expense of others. In all five significant cases, the minority children tended to overchoose Hispanics, who in turn tended to overchoose minority children. This means that some instances of ethnic group cleavage emerge, and the split apparently occurs because of the own-group preferences of Anglo majority children and—possibly as a reaction—a reciprocal bias among the (mainly African-American) minority and Hispanic youngsters, who favored one another's group over the Anglos. No signs of such a cleavage, however, were apparent at the third grade level.

In summary, there were no indications from this analysis that the Hispanic children in the Amigos classes segregated themselves or formed a protective Hispanic ingroup because of the emphasis given to their language and culture. Instead, at the Grade 2 level, they became caught up in a reciprocal appreciation network with the minority children, each group tending to favor the other in their preferences. Moreover, there are no signs that the minority group children were left out in the exchange. The most important point, however, is that by the third grade, children made all their choices in an ethnic-blind and color-blind random fashion. In other words, the third graders chose individuals, not members of particular ethnic or racial groups.

Attitudes Toward Bilingualism

At the end of Grade 3, pupils in the Amigos and English control classes were asked for their opinions about the social and personal advantages associated with being bilingual. Unfortunately, the Spanish controls were not available for this testing. The questions asked were adapted from the studies of Kathryn Lindholm (1990a, 1990b), conducted with West Coast students at the same age/grade level. Table 12 (page 28) summarizes the questions and the average responses given by each group; statistical analyses are given for the comparison of English-Amigos and English controls.

Several general trends emerge. First, there are no statistically significant differences between English-Amigos and English controls on any of the questions. Although the English-Amigos have generally more favorable attitudes toward being bilingual, the English controls also reflect a favorable

Table 9
Spanish Competence of English Amigos vs. Spanish Amigos
(Grade 3, 1990-91 Results, with Groups Matched on Raven Test)

	English Amigos		Spanish Amigos
Spanish **reading:**			
C.T.B.S. mean scores	2. 77 (1.50)		3.92 (1.68)
Sample size	9		9
Reven classification	II		II
Test of significance:		F (1,16) = 2.37 $p = 0.14$	
Spanish **math:**			
C.T.B.S. mean scores	4.87 (1.75)		3.66 (0.90)
Sample size	7		7
Raven classification	II		II
Test of significance:		F (1,14) = 3.28 $p = 0.09$	

Table 10
SSALD (Lau) Scores in English and Spanish: Combined 1989-90 and 1990-91 Cohorts

English Lau Scores: Means		Grade 1	Grade 2	Grade 3
a)	Spanish Amigos	23.48	29.92	33.60
	Sample Size	31	25	20
b)	Spanish Controls	26.33	32.69	23.29
	Sample Size	24	29	17
c)	English Amigos	35.31	37.33	40.00
	Sample Size	42	27	15

Tests of Significance: Analysis of Covariance (Raven scores as covariate)

a) Spanish Amigos vs. Spanish Controls
Group Effect: $F(1,138) = 0.16$, $p = .69$
Grade Effect: $F(2,138) = 6.77$, $p < .002$**
Group x Grade: $F(2,138) = 4.65$, $p < .01$**

a) Spanish Amigos vs. English Amigos
Group Effect: $F(1,149) = 59.40$, $p < .000$**
Grade Effect: $F(2,149) = 13.07$, $p < .000$**
Group X Grade: n.s.

Spanish Lau Scores: Means		Grade 1	Grade 2	Grade 3
a)	Spanish Amigos	24.52	30.76	32.90
	Sample Size	31	25	20
b)	Spanish Controls	29.83	37.38	33.59
	Sample Size	24	29	17
c)	English Amigos	13.55	18.63	21.27
	Sample Size	42	27	15

Tests of Significance: Analysis of Covariance (Raven scores as covariate)

a) Spanish Amigos vs. Spanish Controls
Group Effect: $F(1,138) = 10.43$, $p < .002$**
Grade Effect: $F(2,138) = 6.77$, $p < .002$**
Group x Grade: $F(2,138) = 4.65$, $p < .01$**

a) Spanish Amigos vs. English Amigos
Group Effect: $F(1,149) = 59.40$, $p < .000$**
Grade Effect: $F(2,149) = 13.07$, $p < .000$**
Group X Grade: n.s.

n.s. = not significant

Figure 2A
English Scores on *SSALD*
Combined Cohorts (1989-90 and 1990-91)*

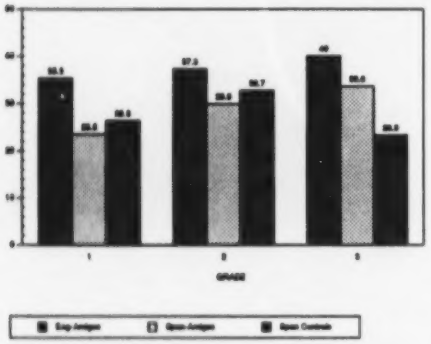
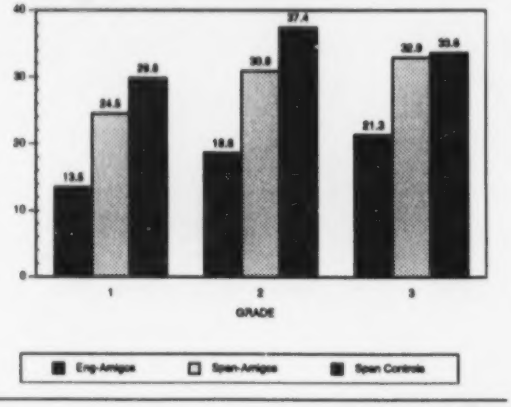


Figure 2B
Spanish Scores on *SSALD*
Combined Cohorts (1989-90 and 1990-91)



attitude in both the social and the personal domains. The Spanish-Amigos have the most favorable attitudes of all three groups (although no statistical comparisons were computed). In terms of habitual usage of the two languages, the English-Amigos are again no different from the English controls: Both groups use mainly English with children outside of school, suggesting that it is an American norm. But it apparently isn't the norm for the Spanish-Amigos, who indicate that they habitually use both English and Spanish with other children outside school.

Because the attitude domain throws additional light on the Amigos experience, in future reports we will deal more systematically with children's evaluations of the program.

Perceived Competence: Pupils' Self-Ratings and Teachers' Ratings

One important goal of bilingual education for language minority children is to enhance their self-esteem. Often those directing bilingual education programs make self-esteem enhancement a stated program goal, as is apparent, for example, in the research of Lindholm (1990a). The importance of self-esteem in the education of language minority children is now being recognized (see, e.g., Hernández-Chavez, 1984), as is the role of self-esteem in the general education process (see, e.g., Harter, 1986).

The methodology used here was adapted from Lindholm (1990b). Questions pertaining to pupils' competence in the academic and personal spheres were administered to samples of Grade 3 pupils. Unfortunately, the Spanish controls were not available for this testing. In addition, teachers of the English-Amigos and English control classes gave their estimates of these pupils' competence. The questions asked and the responses given are presented in Tables 13 and 14 (page 29).

An important innovation in this analysis is the fact that the groups compared are matched for their cognitive/academic potential as measured by the Raven test. To the extent that this potential underlies academic achievement, it should affect both academic and personal self-esteem. In other words, the groups compared have the same potential to succeed in life. The question then is this: Would their ethnicity or their school experiences affect their perceptions of their potential?

The results reflect this matching. There are no significant differences between the English-Amigos and English controls on any of the 12 questions. They are strikingly similar in terms of academic self-esteem, both groups presenting a profile of basic self-assurance. On the personal self-esteem level, the English-Amigos score generally higher (more self-assurance) but not significantly so. Furthermore, teachers rate these two groups similarly (Table 14), and even though the English-Amigos are systematically rated higher than the English controls, there are no statistically reliable group differences. All are seen as exemplary students.

The Spanish-Amigos are not matched with either of the other two groups, but their mean scores are generally the highest (more toward the self-assurance pole) on the academic competence questions. On the personal competence items, they indicate the highest satisfaction with life in general and with themselves. They are very satisfied also with the kind of person they are, while at the same time they have reservations about "the way I do things" and "the way I am." Of course, these are tentative trends only; the issue merits serious consideration, which will be possible when all subgroups are tested and when larger groups can be generated through combination.

In summary, although based on data from a single cohort at the Grade 3 level only, this pilot test of pupils' self-esteem suggests that the Amigos program has not negatively affected the academic or the personal sense of confidence of either the English-Amigos or the Spanish-Amigos pupils. To the contrary, they show as much or more optimism about their academic and personal competence as do the English control pupils, and they are satisfied about themselves and with "life as it is."

CONCLUSION

By comparing the achievement test performance of groups of students who have been matched in terms of academic power and socioeconomic background this study indicates that there has been steady growth in English and Spanish language skills for students in the Amigos program, the transitional bilingual education program, and the standard all-English program. What is noteworthy is that English-Amigos students have not suffered any academic loss in English reading or math even though they have received only half of their instruction via English. The performance of both English- and Spanish-Amigos pupils in math (as reflected in their math achievement scores measured through both Spanish and English) attests to their increasing capability to work productively in both their first and second languages. Both sets of students are acquiring a solid academic foundation and the basic elements necessary to become functionally bilingual.

Through the administration of individualized student sociometric questionnaires, it has also been found that by Grade 3, Amigos students develop friendships in the classroom quite independent of race or ethnicity; their choice of preferred classmates is free of ethnocentricity. In terms of their attitude toward bilingualism, both English-Amigos and English controls hold generally favorable views. However, the Spanish-Amigos presented the most favorable attitudes toward bilingualism, suggesting that they are the most aware of the benefits of being bilingual.

The results of the Grade 3 students' and teachers' responses on the perceived competencies questionnaire indicate similarities again when the English-Amigos and English controls are compared: Both groups have good feelings about their academic ability and self-worth. Teachers rated both groups as competent. Of the three groups, the Spanish-Amigos rated themselves the highest in academic and personal satisfaction.

The responses so far available on our measure of attitudes toward multiculturalism indicate that the Amigos parents hold basically similar views to those of the English control parents. However, by the time their children are in Grade 3, Amigos parents tend to reflect a stronger desire for the maintenance of heritage cultures and languages in American society. However, more data on parents are needed to confirm this trend.

At the community level, the Amigos program has been able to generate a great deal of parental involvement. Meetings are conducted bilingually and this encourages a good deal of communicative exchange. For instance, English-Amigos and Spanish-Amigos parents have voiced concern that they need to learn how to help their children with homework. This goes beyond their taking classes in Spanish or English as a second language, which are already offered. The program has responded with monthly homework help sessions. Other parental concerns focus on keeping Spanish alive beyond the classroom. As Cambridge is a controlled choice school system, students are transported from all parts of the city to the various programs, a fact that enhances motivation and interest. Parents now are discussing ways to assure that their children's new friendships at school continue through home visits.

Teachers, parents, and the researchers involved are aware of the limitations of standardized testing and that for the Amigos program, testing is doubled because it is conducted in two languages. Although the dominant philosophy of the program is to adhere to a developmental curriculum, there is the feeling that as long as standardized tests are administered yearly, there is a push to make sure that all skills that will be tested are covered in the curriculum. In a search for supplementary alternatives, a systemwide portfolio committee, examining longitudinal assessment, has been grappling with this issue for several years and is close to making a major impact on current testing policy. Amigos teachers have also formed support groups to share and identify classroom strategies that promote better second language learning.

Table 11
In-group versus Out-group Preferences: Amigos Classes[a]

Question 1: Who in your class would you most like to eat lunch with?[b]

Kindergarten: $\chi^2 = 10.43$, df = 4, $p < .03$*

	Group Chosen			
Group Choosing	**Minority**	**Majority**	**Hispanic**	
Minority	9 (5.7)	2 (5.3)	6 (6.0)	17
Majority	4 (7.4)	12 (6.8)	6 (7.7)	22
Hispanic	11 (10.8)	8 (9.9)	13 (11.3)	32
	24	22	25	71

(Entries are the actual choices of each subgroup of children; in parentheses are the number of choices expected by chance.)

Grade 1: $\chi^2 = 8.10$, df = 4, $p < .09$ (marginal)

	Group Chosen			
Group Choosing	**Minority**	**Majority**	**Hispanic**	
Minority	4	3	6	13
Majority	2	13	8	23
Hispanic	7	11	24	42
	13	27	38	78

Grade 2: $\chi^2 = 12.44$, df = 4, $p < .01$**

	Group Chosen			
Group Choosing	**Minority**	**Majority**	**Hispanic**	
Minority	0 (1.4)	1 (3.1)	8 (4.5)	9
Majority	1 (2.9)	9 (6.1)	8 (9.0)	18
Hispanic	8 (4.7)	9 (9.8)	12 (14.5)	29
	9	19	28	56

Grade 3: $\chi^2 = 6.89$, df = 4, $p < .14$ n.s.

Question 2: Who in your class would you most like to play games with?

Kindergarten: $\chi^2 = 10.98$, df = 4, $p < .03$*

	Group Chosen			
Group Choosing	**Minority**	**Majority**	**Hispanic**	
Minority	6 (4.8)	3 (5.3)	8 (6.9)	17
Majority	2 (5.9)	12 (6.5)	7 (8.6)	21
Hispanic	12 (9.3)	7 (10.2)	14 (13.5)	33
	20	22	29	71

Grade 1: $\chi^2 = 2.19$, df = 4, $p < .70$, n.s.

Grade 2: $\chi^2 = 4.27$, df = 4, $p < .37$, n.s

Grade 3: $\chi^2 = 5.98$, df = 4, $p < .20$, n.s.

Table 11 Continued

Question 3: Who in your class would you prefer sitting next to?

Kindergarten: $\chi^2 = 3.22$, df = 4, $p < .54$, n.s.

Grade 1: $\chi^2 = 5.36$, df = 4, $p < .26$, n.s.

Grade 2: $\chi^2 = 10.91$, df = 4, $p < .03$*

	Group Chosen			
Group Choosing	Minority	Majority	Hispanic	
Minority	6 (4.8)	3 (5.3)	8 (6.9)	17
Majority	2 (5.9)	12 (6.5)	7 (8.6)	21
Hispanic	12 (9.3)	7 (10.2)	14 (13.5)	33
	20	22	29	71

Grade 3: $\chi^2 = 6.21$, df = 4, $p < .18$ n.s.

Question 4: Who in your class is your closest friend?

Kindergarten: $\chi^2 = 2.73$, df = 4, $p < .60$, n.s.

Grade 1: $\chi^2 = 4.94$, df = 4, $p < .29$, n.s.

Grade 2: $\chi^2 = 3.77$, df = 4, $p < .44$, n.s.

Grade 3: $\chi^2 = 3.30$, df = 4, $p < .51$, n.s.

Question 5: Who in your class would you most like to come to your home for a party?

Kindergarten: $\chi^2 = 5.25$, df = 4, $p < .26$, n.s.

Grade 1: $\chi^2 = 3.20$, df = 4, $p < .53$, n.s.

Grade 2: $\chi^2 = 9.43$, df = 4, $p < .05$*

	Group Chosen			
Group Choosing	Minority	Majority	Hispanic	
Minority	0 (1.8)	2 (2.6)	7 (4.7)	9
Majority	2 (3.5)	8 (5.1)	8 (9.3)	18
Hispanic	9 (5.7)	6 (0.3)	14 (15.0)	29
	11	16	29	56

Grade 3: $\chi^2 = 7.73$, df = 4, $p < .10$ (marginal), n.s.

[a]Combined 1989-90 and 1990-91 Cohorts.

[b]For Questions 1-5, a group breakdown of responses is provided only when the Chi-square is statistically significant.

Table 12
Attitudes Toward Bilingualism: Grade 3[a]

		(1) Spanish Amigos	(2) English Amigos	(3) English Control	F-ratios Group 2 vs. 3[b]
Social Value of Bilingualism					
1.	It is important to know another language to learn about other people.	3.80[c] (15)	3.56 (9)	3.17 (17)	0.66, $p = 0.42$
2.	You enjoy meeting and listening to people who speak another language.	3.47 (15)	3.22 (9)	3.12 (17)	0.06, $p = 0.81$
3.	Learning Spanish is important so that you can talk with Spanish-speaking people.	3.67 (15)	3.89 (9)	3.29 (17)	2.71, $p = 0.11$
4.	Learning Spanish is important so that you can meet and talk with different kinds of people.	3.93 (15)	3.78 (9)	3.06 (17)	2.39, $p = 0.13$
Personal Value of Bilingualism					
5.	Learning two languages will make you smarter than learning only one language.	3.60 (15)	3.44 (9)	3.41 (17)	0.01, $p = 0.94$
6.	Learning two languages will help you do better in school.	3.80 (15)	3.00 (9)	3.06 (17)	0.02, $p = 0.90$
7.	Learning two languages will help you get better grades.	3.47 (15)	3.22 (9)	2.67 (15)	1.16, $p = 0.29$
8.	Knowing two languages will help you get a better job when you grow up.	3.43 (14)	3.11 (9)	2.69 (16)	0.84, $p = 0.37$
Habitual Usage					
9.	Do you speak mostly English with other kids outside of school?	3.13 (15)	3.78 (9)	3.71 (17)	0.07, $p = 0.80$
10.	Do you speak mostly Spanish with other kids outside of school?	3.07 (14)	1.78 (9)	1.82 (17)	0.01, $p = 0.92$

a The entries are mean scores based on four-step scales: 1 = no, never, I disagree; 2 = seldom, not very often, once in a while; 3 = usually, most of the time; 4 = yes, always, I agree.
b The F-ratios are for comparisons of the English-Amigos and English control groups.
c No data were collected for Spanish controls and thus no tests of significance were calculated.

Table 13
Perceived Competence: Third Grade Students' Views[a]

	(1) Spanish Amigos	(2) English Amigos	(3) English Controls	F-Ratios Groups 2 & 3[b]
1. I am good at my school work.	3.60[c] (15)	3.33 (6)	3.50 (6)	0.12, $p = 0.73$
2. I am as smart as other students.	3. 47 (15)	2.50 (6)	3.50 (6)	2.13, $p = 0.16$
3. I do my school work quickly.	3.73 (15)	3.00 (5)	3.00 (5)	0.00, $p = 1.00$
4. I remember easily.	3.53 (15)	2.67 (6)	2.67 (6)	0.00, $p = 1.00$
5. I do well at class work.	3.53 (15)	3.80 (5)	3.80 (5)	0.00, $p = 1.00$
6. I am able to figure out answers.	3.93 (15)	3.50 (6)	3.50 (6)	0.00, $p = 1.00$
7 I am happy with myself.	3.87 (15)	3.33 (6)	3.50 (6)	0.06, $p = 0.82$
8. I like the way life is.	3.60 (15)	3.00 (5)	2.60 (5)	0.35, $p = 0.57$
9. I am happy with myself as a person.	3.00 (15)	3.83 (6)	3.33 (6)	0.92, $p = 0.36$
10. I like the kind of person I am.	3.67 (15)	3.67 (6)	2.83 (6)	1.71, $p = 0.22$
11. I am happy with the way I am.	2.80 (15)	3.17 (6)	3.00 (6)	0.06, $p = 0.82$
12. The way I do things is fine.	2.73 (15)	2.80 (5)	2.80 (5)	0.00, $p = 1.00$

a Entries are based on a four-step scale: 1 = No, I disagree, false; 2 = Not often, once in a while; 3= Usually, most of the time; 4 = Yes, I agree, true.
b Paired groups are matched on Raven scores.
c No data were available for Spanish controls; no significance tests were calculated.

Table 14
Perceived Competence: Teachers' Views at Grade 3

	English Amigos	English Controls	F-ratio, p[b]
This student . . .			
. . . is good at school work.[a]	3.67 (6)	3.00 (6)	1.43, $p = 0.26$
. . . remembers easily.	3.50 (6)	3.00 (6)	0.65, $p = 0.44$
. . . figures out answers.	3.83 (6)	3.00 (6)	2.36, $p = 0.16$
. . . makes friends easily.	3.83 (6)	3.33 (6)	0.92, $p = 0.36$
. . . has many friends.	4.00 (6)	3.33 (6)	1.82,$p = 0.21$
. . . is popular with others.	3.83 (6)	3.33 (6)	0.92, $p = 0.36$
. . . is well behaved.	4.00 (6)	3.33 (6)	1.82, $p = 0.21$
. . . acts appropriately.	4.00 (6)	3.17 (6)	3.05, $p = 0.11$
. . . doesn't get in trouble.	3.67 (6)	3.17 (6)	0.92, $p = 0.36$

a 1 = No, I disagree, false; 2 = Not often, once in a while; 3 = Usually, most of the time; 4 = Yes, true, I agree.
b The paired groups are matched in terms of Raven scores.

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